IN THE CLAIMS

Please amend the claims as follows:

Claims 1-5 (Cancelled).

Claim 6 (Currently Amended): [[A]] The method according claim [[5]] 36, wherein [[if]] when valid data records exist in only one of said ~~two systems~~ first and second location data, the data determined as being valid are used for determining the position and location of the instrument or for tracking the instrument.

Claim 7 (Currently Amended): [[A]] The method according to claim [[5]] 36, wherein [[if]] when redundant data records defined as being valid between said first and second location data exist, ~~the same~~ said first and second location data are used to increase [[the]] measuring exactness ~~and/or~~ or to quantify the measuring exactness.

Claim 8 (Currently Amended): [[A]] The method according to claim [[4]] 36, ~~wherein~~ further comprising: ~~for the detection of the~~ detecting a location of the operating microscope in space [[,]] with a stereo camera pair [[is]] provided at or on the microscope, which allows a motion tracking relative to fixed markings provided to the patient ~~and/or~~ or in space.

Claim 9 (Currently Amended): [[A]] The method according to claim [[1]] 36, ~~wherein~~ further comprising: providing marking points ~~are provided~~ at or on [[the]] a tissue surface of [[the]] a patient, [[the]] a change of location of which is detected by the image receivers and

determined by means of the computer system is used for determining [[the]] a brain shifting at [[the]] an open skull of the patient so as to perform a correction of preoperatively obtained data.

Claim 10 (Currently Amended): [[A]] The method according to claim [[1]] 36, wherein

the operating microscope comprises two optical channels brought out of center behind a common front lens having a common object plane and [[the]] a same magnification for both optical channels, wherein a correction function for [[the]] distortion errors is incorporated in [[the]] a stereoscopic image analysis, which is dependent on [[the]] a currently used settings of zoom and focus.

Claim 11 (Currently Amended): [[A]] The method according to claim 10, ~~wherein~~ further comprising:

calibrating ~~a calibration is performed~~ for the correction of errors, wherein [[the]] parameters of the ~~mentioned~~ correction function are empirically determined by calibration measurements at different settings of zoom and focus and different object interspaces and [[the]] an obtained parameter set is stored.

Claims 12-17 (Cancelled).

Claim 18 (Currently Amended): An operating microscope~~, especially for the use in a~~ for performing the method according to claim [[1]] 36, wherein

the microscope comprises a module for detecting [[the]] space coordinates relative to [[the]] an operating room or to [[the]] a patient.

Claim 19 (Currently Amended): An operating microscope according to claim 18, wherein

the module includes a stereo camera pair with a computer for [[the]] stereoscopic image analysis being associated therewith, wherein the stereo camera pair is aligned to marking points on the patient or in space, so that the location and orientation of the microscope relative to the patient or to the space can be determined.

Claim 20 (Previously Presented): An operating microscope according to claim 18, wherein

the module includes a PMD sensor array with a computer for the evaluation of sensor data being associated therewith, wherein the PMD sensor array, with the pertinent optic and modulated illumination, is aligned to marking points on the patient or in space, so that the location and orientation of the microscope relative to the patient or to the space can be determined.

Claim 21 (Currently Amended): An operating microscope according to claim 18, wherein

the module comprises a magnetic navigational system or components of such a system~~, especially~~ including echo sensors.

Claim 22 (Previously Presented): An operating microscope according to claim 18, wherein

the module comprises one or more transmitters of a time of flight distance measurement system based on sound, ultrasound or on electromagnetic radiation, which operates in the time or frequency domain.

Claim 23 (Previously Presented): An operating microscope according to claim 18, wherein

the module comprises one or more receivers of a time of flight distance measurement system based on sound or ultrasound or on electromagnetic radiation, which operates in the time or frequency domain.

Claim 24 (Previously Presented): An operating microscope according to claim 18, wherein

the module comprises gyroscopes or inclination sensors.

Claim 25 (Previously Presented): An operating microscope according to claim 18, wherein

the module comprises arrangements or facilities for combining different measurement methods.

Claim 26 (Currently Amended): An operating microscope~~, especially for the use in a~~ for performing the method according to claim [[1]] 36, wherein

the measured distance value of a PMD sensor from a predefined area of the image field of the microscope, ~~e.g. the~~ including a center of the image, is transmitted to the navigational system.

Claim 27 (Currently Amended): An operating microscope~~, especially for the use in a~~ for performing the method according to claim [[1]] 36, wherein

the measured distance value of a PMD sensor from a predefined area of the image field of the microscope, ~~e.g. the~~ including a center of the image, is provided and used as correcting variable for the focusing unit of the microscope.

Claim 28 (Currently Amended): An operating microscope~~, especially for the use in a~~ for performing the method according to claim [[1]] 36, wherein

a device for [[the]] projection of light markings is provided, wherein [[the]] areas of the field of operation marked with said light are subjected to a stereoscopic image analysis by means of two cameras connected to the microscope.

Claim 29 (Currently Amended): An operating microscope~~, especially for the use in a~~ for performing the method according to claim [[1]] 36, ~~wherein~~ the operating microscope comprising:

~~it includes~~ a device for the projection of light markings connected to the microscope and wherein the areas of the field of operation marked with said light can be evaluated by means of a camera connected to the microscope and stereoscopic image analysis by using the principle of the inverse camera.

Claim 30 (Currently Amended): An operating microscope~~, especially for the use in a~~ for performing the method according to claim [[1]] 36, wherein

the microscope comprises a PMD sensor module connected therewith, on which [[the]] an image of [[the]] situs is represented, and wherein an associated modulated illumination device is provided.

Claim 31 (Currently Amended): An operating microscope according to claim 28, wherein

[[the]] currently obtained topographic data are transmitted to a navigational system and are used by [[the]] a same as starting data for [[the]] correction of a brain shift.

Claim 32 (Currently Amended): An operating microscope according to claim 28, wherein

the measured distance value from a predefined area of the field of view of the microscope, ~~e.g. the~~ including a center of the image, is transmitted to a navigational system.

Claim 33 (Currently Amended): An operating microscope according to claim 28, wherein

the measured distance value from a predefined area of the field of view of the microscope, ~~e.g.~~ including the center of the image, is transmitted to the focusing unit of the microscope as correcting variable.

Claim 34 (Currently Amended): An operating microscope according to claim 28, wherein

one or more supporting points of detected topograms are marked onto said points by [[the]] a projection of visible light.

Claim 35 (Currently Amended): An operating microscope according to claim 28, wherein

either the optical observation channels of the microscope are used for the cameras, the device for the projection of light markings ~~and/or~~ or the PMD sensor, or additional optical channels are provided and used.

Claim 36 (New): A method for optimizing identification of a current position of an operating instrument in surgical navigation, including neuronavigation, with an operating microscope having an optoelectronic image receiver, the method comprising:

obtaining first location data of a location of the operating instrument from an optical or magnetic navigation system;

obtaining second location data of a location of the operating instrument from the optoelectronic image receiver of the operating microscope, including performing a depth of focus evaluation, a stereoscopic image analysis, or an evaluation of signals obtained by a PMD (Photonic Mixer Device) including the pertinent modulated illumination to supplement a depth component of the second location data; and

determining an actual position of the operating instrument in a three-dimensional coordinate system based on the obtained first and second location data.

Claim 37 (New): A system for optimizing identification of a current position of an operating instrument in surgical navigation, including neuronavigation, the system comprising:

an operating microscope including an optoelectronic image receiver;

means for obtaining first location data of a location of the operating instrument from an optical or magnetic navigation system;

means for obtaining second location data of a location of the operating instrument from the optoelectronic image receiver of the operating microscope, including performing a

depth of focus evaluation, a stereoscopic image analysis, or an evaluation of signals obtained by a PMD (Photonic Mixer Device) including the pertinent modulated illumination to supplement a depth component of the second location data; and

means for determining an actual position of the operating instrument in a three-dimensional coordinate system based on the obtained first and second location data.